FUJITSU

Fujitsu LifeBook

N Series

BIOS Guide

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FUJITSU PC CORPORATION

N Series BIOS

BIOS SETUP UTILITY

The BIOS Setup Utility is a program that sets up the operating environment for your notebook. Your BIOS is set at the factory for normal operating conditions, therefore there is no need to set or change the BIOS environment to operate your notebook.

The BIOS Setup Utility configures:

- Device control feature parameters, such as changing I/O addresses and boot devices.
- System Data Security feature parameters, such as passwords.

Entering the BIOS Setup Utility

To enter the BIOS Setup Utility do the following:

1. Turn on or restart your notebook.
2. Press the [F2] key once the Fujitsu logo appears on the screen. This will open the main menu of the BIOS Setup Utility with the current settings displayed.
3. Press the arrow keys to scroll through the other setup menus to review or alter the current settings.

Navigating Through The Setup Utility

The BIOS setup utility consists of six menus: Main, Advanced, Security, Boot, Info, and Exit. This document explains each menu in turn, including all submenus and setup items.

The following procedures allow you to navigate the setup utility menus:

1. To select a menu, use the cursor keys: [←], [→].
2. To select a field within a menu or a submenu, use the cursor keys: [↑], [↓].
3. To select the different values for each field, press the [Spacebar] or [+] to change to the next higher selection and [F5] or [-] to go to the next lower selection.
4. To activate a submenu press the [Enter] key.
5. To return to a menu from a submenu, press the [Esc] key.
6. To go to the Exit menu from any other menu, press the [Esc] key.

POINTS

- Selecting a field causes a help message about that field to be displayed on the right-hand side of the screen.
- Pressing the Enter key with the highlight on a selection that is not a submenu or auto selection will cause a list of all options for that item to be displayed. Pressing the Enter key again will select the highlighted choice.

7. Pressing the [F9] key resets all items in the BIOS to the default values.
8. Pressing the [F10] key saves the current configuration and exits the BIOS Setup Utility. You will be asked to verify this selection before it is executed.
9. Pressing the [F1] key gives you a general help screen.

Entering the Setup Utility After a Configuration Change or System Failure

If there has been a change in the system configuration that does not agree with the parameter settings stored in your BIOS memory, or there is a failure in the system, the system beeps and/or displays an error message after the Power On Self Test (POST). If the failure is not too severe, it will give you the opportunity to modify the settings of the setup utility, as described in the following steps:

1. When you turn on or restart the computer there is a beep and/or the following message appears on the screen:

   ```
   Error message - please run SETUP
   program Press <F1> key to continue,
   <F2> to run SETUP
   ```

2. If an error message is displayed on the screen, and you want to continue with the boot process and start the operating system anyway, press the [F1] key.

POINTS

- If your notebook emits a series of beeps that sounds like a code and the display is blank, please refer to the Troubleshooting Section in the system User's Guide. The Troubleshooting Section includes a list of error messages and their meanings.
- If your data security settings require it, you may be asked for a password before the operating system will be opened.

3. If an error message is displayed on the screen, and you want to enter the setup utility, press the [F2] key.
4. When the setup utility starts with a fault present, the system displays the following message:

   ```
   Warning!
   Error message
   [Continue]
   ```

5. Press any key to enter the setup utility. The system will then display the Main Menu with current parameters values.

MAIN MENU – SETTING STANDARD SYSTEM PARAMETERS

The Main Menu allows you to set or view the current system parameters. Follow the instructions for Navigating Through The Setup Utility to make any changes. *(See Navigating Through The Setup Utility on page 2 for more information.)*

The following tables show the names of the menu fields for the Main menu and its submenus, all of the options for each field, the default settings and a description of the field's function and any special information needed to help understand the field's use.

POINT

System Time and System Date can also be set from your operating system without using the setup utility. Use the calendar and time icon on your Windows Control panel or type time or date from the MS-DOS prompt.

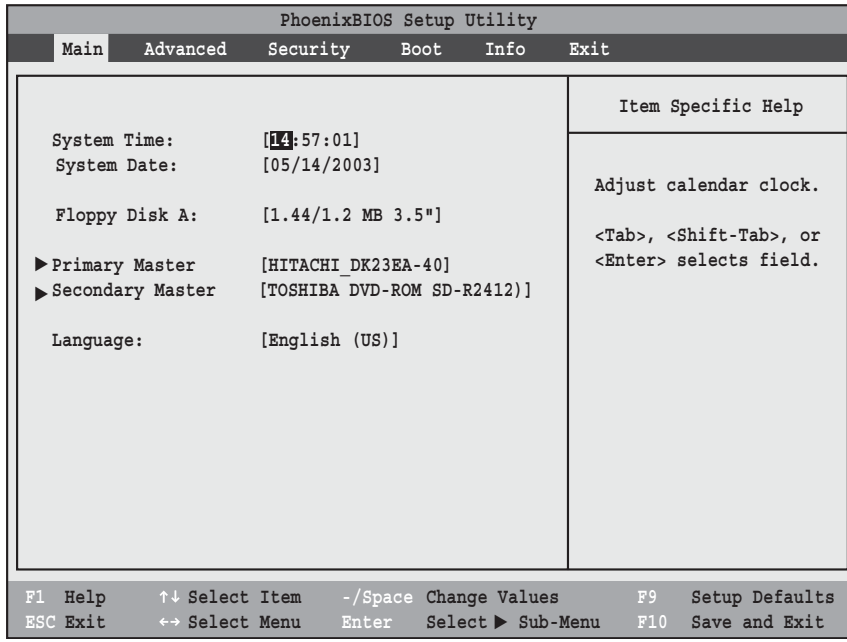
PhoenixBIOS Setup Utility
Main Advanced Security Boot Info Exit
Item Specific Help
System Time: [14:57:01]
System Date: [05/14/2003]
Floppy Disk A: [1.44/1.2 MB 3.5"]
▶Primary Master [HITACHI_DK23EA-40]
▶Secondary Master [TOSHIBA DVD-ROM SD-R2412)]
Language: [English (US)]
Adjust calendar clock.
<Tab>, <Shift-Tab>, or <Enter> selects field.
F1 Help ↑↓ Select Item -/Space Change Values F9 Setup Defaults
ESC Exit ↔ Select Menu Enter Select ▶ Sub-Menu F10 Save and Exit

Figure 1. Main Menu

Table 1: Fields, Options and Defaults for the Main Menu

Note that the parameters listed in the following table may vary depending upon your system's configuration.

Menu Field	Options	Default	Description
System Time:	—	—	Sets and displays the current time. Time is in a 24 hour format of hours:minutes:seconds with 2 digits for each. (HH:MM:SS). Example: 16:45:57. You may change each segment of the time separately. Move between the segments with the [Tab] key and/or [Shift] + [Tab] keys.
System Date:	—	—	Sets and displays the current date. Date is in a month/day/year numeric format with 2 digits each for month and day and 4 digits for year. (MM/DD/YYYY) for example: 03/20/1998. You may change each segment of the date separately. Move between the segments with the [Tab] key and/or [Shift] + [Tab] keys.

Table 1: Fields, Options and Defaults for the Main Menu

Note that the parameters listed in the following table may vary depending upon your system's configuration.

Menu Field	Options	Default	Description
Floppy Disk A:	■ Disabled ■ 1.44/1/2 MB 3.5″	[1.44/1.2 MB 3.5″]	Allows you to select floppy disk drive type (nte that 1.2 MB 3.5″ references a 1024 byte/sector Japanese media format.)
Primary Master:	■ Selects Primary Master submenu	The product number of the hard drive.	Display the type of device on this ATA/ATAPI interface, if there is one. Pressing the Enter key selects the Primary Master sub-menu allowing additional device configuration options for this interface.
Secondary Master	■ Selects Secondary Master submenu	The product number of the CD-ROM drive.	Display the type of device on this ATA/ATAPI interface, if there is one. Pressing the Enter key selects the Secondary Master sub-menu allowing additional device configuration options for this interface
Language:	■ English (US) ■ Japanese (JP)	[English (US)]	The default setting differs between the US/European and the Japanese model. Selects the display language for the BIOS.

Primary Master Submenu of the Main Menu

The Primary Master submenu identifies what ATA devices are installed.

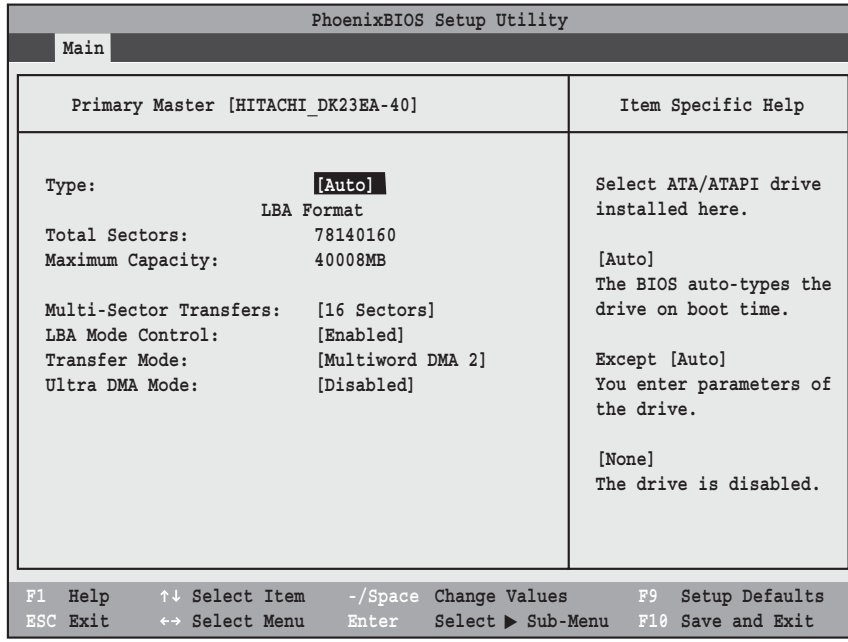
PhoenixBIOS Setup Utility
Main
Primary Master [HITACHI_DK23EA-40]
Item Specific Help
Type: [Auto]
LBA Format
Total Sectors: 78140160
Maximum Capacity: 40008MB
Multi-Sector Transfers: [16 Sectors]
LBA Mode Control: [Enabled]
Transfer Mode: [Multiword DMA 2]
Ultra DMA Mode: [Disabled]
Select ATA/ATAPI drive installed here.
[Auto]
The BIOS auto-types the drive on boot time.
Except [Auto]
You enter parameters of the drive.
[None]
The drive is disabled.
F1 Help ↑↓ Select Item -/Space Change Values F9 Setup Defaults
ESC Exit ↔ Select Menu Enter Select ▶ Sub-Menu F10 Save and Exit

Figure 2. Primary Master Submenu

Table 2: Fields, Options and Defaults for the Primary Master Submenu of the Main Menu

Menu Field	Options	Default	Description
Type:	▪ Auto ▪ None ▪ CD-ROM ▪ Hard Disk	[Auto]	Selects the ATA/ATAPI device type. Select Auto to have the type automatically identified by the BIOS at POST. If None is selected, all of the following Set-up items do not appear. Select CD-ROM if a CD-ROM drive is installed at this connection. If Hard Disk is selected, you must specify the number of Cylinders, Heads, and Sectors for the drive.
LBA Format			**Logical Block Addressing (LBA)**
Total Sectors:	---	---	The total number of sectors on your hard disk
Maximum Capacity:	---	---	The maximum capacity of your hard disk
CHS Format			**Cylinders/Heads/Sectors**
Cylinders:	▪ A number between 0 and 65,535	—	This item is active only when Hard Disk is selected as the type. This field is changed by incrementing (pressing the [Spacebar]) or by typing in the number.

Table 2: Fields, Options and Defaults for the Primary Master Submenu of the Main Menu

Menu Field	Options	Default	Description
Heads:	■ A number between 1 and 16	—	This item is active only when Hard Disk is selected as type. You can change the value by incrementing (pressing the [Spacebar]) or by typing in the number.
Sectors:	■ A number between 0 and 63	—	This item is active only when Hard Disk is selected as type. You can change the value by incrementing (pressing the [Spacebar]) or by typing in the number.
Maximum Capacity:	■ Display only	—	Displays the maximum capacity of the drive calculated from the parameters of the hard disk when Auto is selected and the type is identified as hard disk.
Multi-Sector Transfers:	■ Disabled ■ 2 Sectors ■ 4 Sectors ■ 8 Sectors ■ 16 Sectors	[16 Sectors]	This option cannot be changed when Auto is selected. Specify the number of sectors per block for multiple sector transfer.
LBA Mode Control:	■ Disabled ■ Enabled	[Enabled]	Enables or disables logical Block Addressing in place of Cylinder, Head, Sector addressing. This option cannot be changed when Auto is selected.
Transfer Mode:	■ Standard ■ Fast PIO 1 ■ Fast PIO 2 ■ Fast PIO 3 ■ Fast PIO 4 ■ Multiword DMA 1 ■ Multiword DMA 2	[Multiword DMA 2]	Selects the method for moving data to/from the drive. Autotype the drive to select the optimum transfer mode. This option cannot be changed when Auto is selected.
Ultra DMA Mode:	■ Disabled ■ Mode 0 ■ Mode 1 ■ Mode 2 ■ Mode 3 ■ Mode 4 ■ Mode 5	[Disabled]	Selects the method for moving data to/from the drive. Autotype the drive to select the optimum transfer mode. This option cannot be changed when Auto is selected.

Secondary Master Submenu of the Main Menu

The Secondary Master submenu allows you to configure secondary ATA devices.

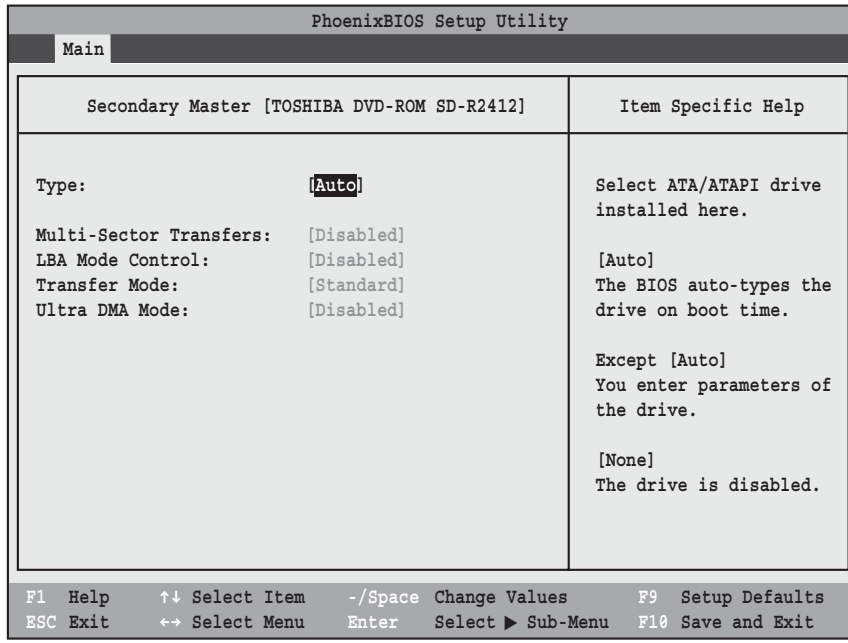
PhoenixBIOS Setup Utility
Main
Secondary Master [TOSHIBA DVD-ROM SD-R2412]
Item Specific Help
Type: [Auto]
Multi-Sector Transfers: [Disabled]
LBA Mode Control: [Disabled]
Transfer Mode: [Standard]
Ultra DMA Mode: [Disabled]
Select ATA/ATAPI drive installed here.
[Auto]
The BIOS auto-types the drive on boot time.
Except [Auto]
You enter parameters of the drive.
[None]
The drive is disabled.
F1 Help ↑↓ Select Item -/Space Change Values F9 Setup Defaults
ESC Exit ↔ Select Menu Enter Select ▶ Sub-Menu F10 Save and Exit

Figure 3. Secondary Master Submenu

Table 3: Fields, Options and Defaults for the Secondary Master Submenu of the Main Menu

Menu Field	Options	Default	Description
Type:	▪ Auto ▪ None ▪ CD-ROM ▪ Hard Disk	[Auto]	NOTE: The Type field does not appear as a drop-down menu. Tap the spacebar to cycle through the selections. Selects the ATA/ATAPI device type. Select Auto to have the type automatically identified by the BIOS at POST. If None is selected, all of the following Set-up items do not appear. Select CD-ROM, SuperDisk or Hard Disk for appropriate drive type installed at this connection.
CHS Format			Cylinders/Heads/Sectors
Cylinders:	▪ A number between 0 and 65,535	—	This item appears only when Hard Disk is selected as the type. This field is changed by incrementing (pressing the [Spacebar]) or by typing in the number.
Heads:	▪ A number between 1 and 16	—	This item appears only when Hard Disk is selected as type. You can change the value by incrementing (pressing the [Spacebar]) or by typing in the number.
Sectors:	▪ A number between 0 and 63	—	This item appears only when Hard Disk is selected as type. You can change the value by incrementing (pressing the [Spacebar]) or by typing in the number.

Table 3: Fields, Options and Defaults for the Secondary Master Submenu of the Main Menu

Menu Field	Options	Default	Description
Maximum Capacity:	▪ Display only	—	Displays the maximum capacity of the drive calculated from the parameters of the hard disk when Auto is selected and the type is identified as hard disk, or User is selected.
Multi-Sector Transfers:	▪ Disabled ▪ 2 Sectors ▪ 4 Sectors ▪ 8 Sectors ▪ 16 Sectors	[Disabled]	This option cannot be changed when Auto is selected. Specify the number of sectors per block for multiple sector transfer.
LBA Mode Control:	▪ Disabled ▪ Enabled	[Disabled]	Enables or disables Logical Block Addressing in place of Cylinder, Head, Sector addressing. This option cannot be changed when Auto is selected.
Transfer Mode:	▪ Standard ▪ Fast PIO 1 ▪ Fast PIO 2 ▪ Fast PIO 3 ▪ Fast PIO 4 ▪ Multiword DMA 1 ▪ Multiword DMA 2	[Standard]	Selects the method for moving data to/from the drive. Autotype the drive to select the optimum transfer mode. This option cannot be changed when Auto is selected. Multi-word DMA is automatically set to mode 1 for Fast PIO 1, Fast PIO 2, Fast PIO 3, and set to mode 2 for Fast PIO 4 / DMA.
Ultra DMA Mode:	▪ Disabled ▪ Mode 0 ▪ Mode 1 ▪ Mode 2 ▪ Mode 3 ▪ Mode 4 ▪ Mode 5	[Disabled]	Selects the method for moving data to/from the drive. Autotype the drive to select the optimum transfer mode. This option cannot be changed when Auto is selected.
LBA Format			Logical Block Addressing (LBA)
Total Sectors:	---	---	The total number of sectors on your hard disk
Maximum Capacity:	---	---	The maximum capacity of your hard disk

Exiting from Main Menu

When you have finished setting the parameters on this menu, you can either exit from the setup utility, or move to another menu. If you wish to exit from the setup utility, press the [Esc] key or use the cursor keys to go to the Exit menu. If you wish to move to another menu, use the cursor keys.

ADVANCED MENU – SETTING DEVICE FEATURE CONTROLS

The Advanced Menu allows you to:

- Set the I/O addresses for the serial and parallel ports.
- Set the keyboard and mouse features.
- Select between the display panel and an external CRT display.
- Enable or disable compensation for your display.
- Enables or disables the internal controllers.
- Configure CPU and USB features in your system.

Follow the instructions for Navigating Through the Setup Utility to make any changes.
(See Navigating Through The Setup Utility on page 2 for more information.)

The following tables show the names of the menu fields for the Advanced Menu and its submenus, all of the options for each field, the default settings and a description of the field's function and any special information needed to help understand the field's use.

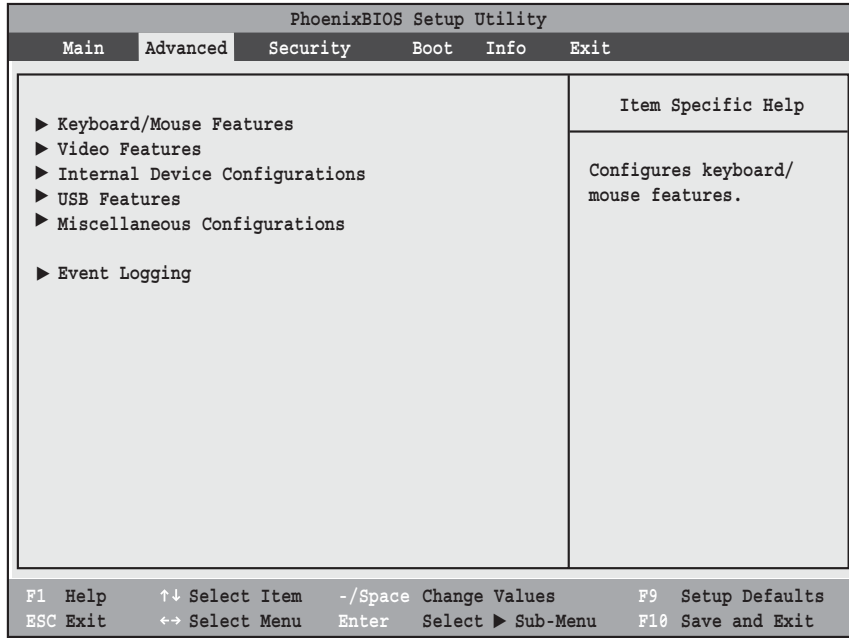

Figure 4. Advanced Menu

Table 4: Fields, Options and Defaults for the Advanced Menu

Menu Field	Options	Default	Description
Keyboard/Mouse Features	—	—	When selected, opens the Keyboard/Mouse Features submenu, which allows setting external and internal keyboard and mouse parameters.
Video Features	—	—	When selected, opens the Video Features submenu, which allows setting of the display parameters, including routing of video signals to different displays.
Internal Device Configurations	—	—	When selected, opens the Internal Device Configuration submenu, which allows enabling or disabling the Floppy Disk, IDE, Modem and LAN Controllers.

Table 4: Fields, Options and Defaults for the Advanced Menu

Menu Field	Options	Default	Description
USB Features	___	___	When selected, opens the USB Features submenu to allow you to enable or disable the USB Floppy Disk Drive.
Miscellaneous Configurations	___	___	When selected, opens the Miscellaneous Configurations submenu to allow you to enable or disable the power button and the Wake Up On LAN feature.
Event Logging	——	——	When selected, opens the event logging submenu.

Keyboard/Mouse Features Submenu of the Advanced Menu

The Keyboard/Mouse Features submenu is for enabling or disabling the NumLock feature.

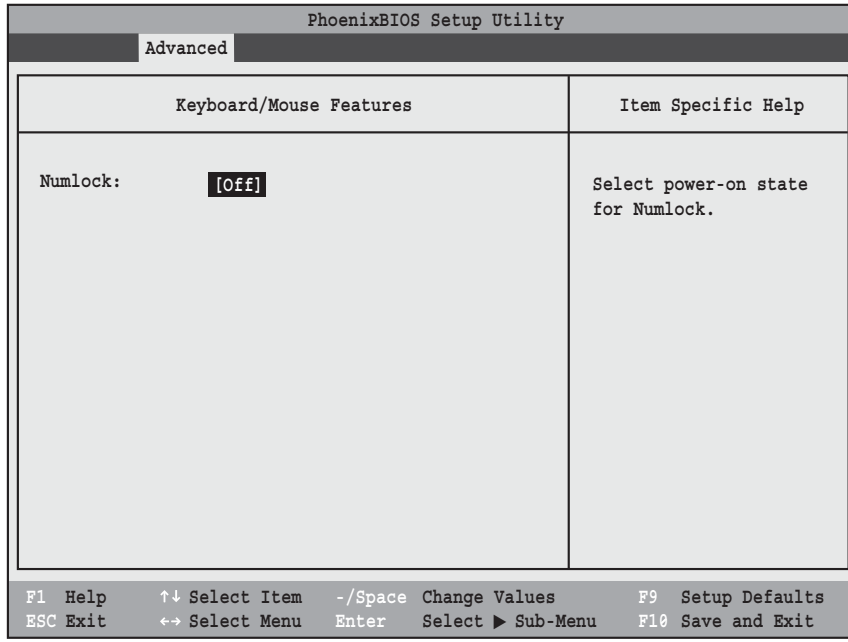

Figure 5. Keyboard/Mouse Features Submenu

Table 5: Fields, Options and Defaults for the Keyboard/Mouse Submenu of the Advanced Menu

Menu Field	Options	Default	Description
Numlock:	▪ On ▪ Off	[Off]	Sets the NumLock function state when the computer completes booting.

Video Features Submenu of the Advanced Menu

The Video Features Submenu is for setting the display parameters.

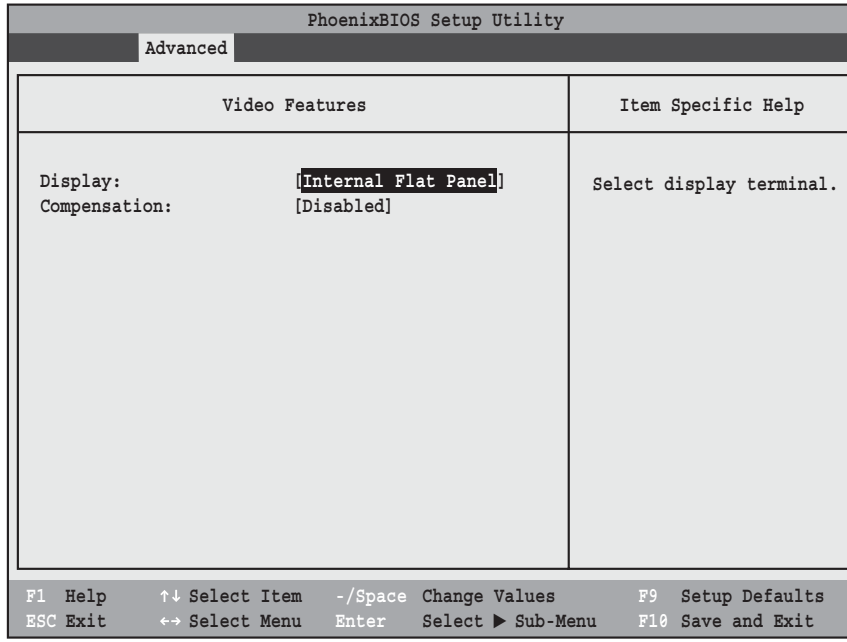
PhoenixBIOS Setup Utility
Advanced
Video Features
Item Specific Help
Display: [Internal Flat Panel]
Compensation: [Disabled]
Select display terminal.
F1 Help ↑↓ Select Item -/Space Change Values F9 Setup Defaults
ESC Exit ↔ Select Menu Enter Select ▶ Sub-Menu F10 Save and Exit

Figure 6. Video Features Submenu

Table 6: Fields, Options and Defaults for the Video Features Submenu of the Advanced Menu

Menu Field	Options	Default	Description
Display:	▪ Internal Flat Panel ▪ External ▪ Simultaneous	[Internal Flat-Panel]	Selects where the video signal will be routed.
Compensation:	▪ Disabled ▪ Enabled	[Disabled]	Enables or disables compensation which controls spacing on the display. When enabled, displays with less than pixel resolution 1024 x 768 or 800 x 600 will still cover the entire screen. A resolution below 800 x 600 will fill the screen, but due to the low resolution, will appear blocky and may not be acceptable.

Internal Device Configurations Submenu of the Advanced Menu

The Internal Device Configuration submenu allows the user to configure other internal devices.

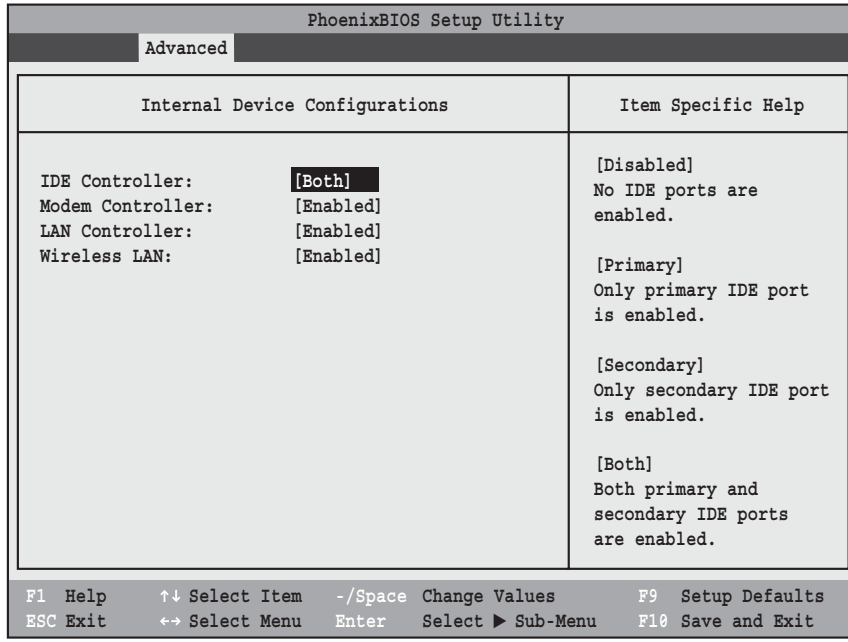
PhoenixBIOS Setup Utility
Advanced
Internal Device Configurations
Item Specific Help
IDE Controller: [Both]
Modem Controller: [Enabled]
LAN Controller: [Enabled]
Wireless LAN: [Enabled]
[Disabled]
No IDE ports are enabled.
[Primary]
Only primary IDE port is enabled.
[Secondary]
Only secondary IDE port is enabled.
[Both]
Both primary and secondary IDE ports are enabled.
F1 Help ↑↓ Select Item -/Space Change Values F9 Setup Defaults
ESC Exit ↔ Select Menu Enter Select ▶ Sub-Menu F10 Save and Exit

Figure 7. Internal Device Configuration Submenu

Table 7: Fields, Options and Defaults for the Internal Device Configuration Submenu of the Advanced Menu

Menu Field	Options	Default	Description
IDE Controller:	▪ Disabled ▪ Primary ▪ Secondary ▪ Both	[Both]	Enables or disables selected IDE devices.
Modem Controller:	▪ Disabled ▪ Enabled	[Enabled]	Enables or disables Modem controller.
LAN Controller:	▪ Disabled ▪ Enabled	[Enabled]	Enables or disables the LAN controller.
Wireless LAN:	▪ Disabled ▪ Enabled	[Enabled]	Enables or disables the wireless LAN.

USB Features Submenu of the Advanced Menu

The USB Features Submenu provides options for enabling or disabling the USB Floppy Disk Drive.

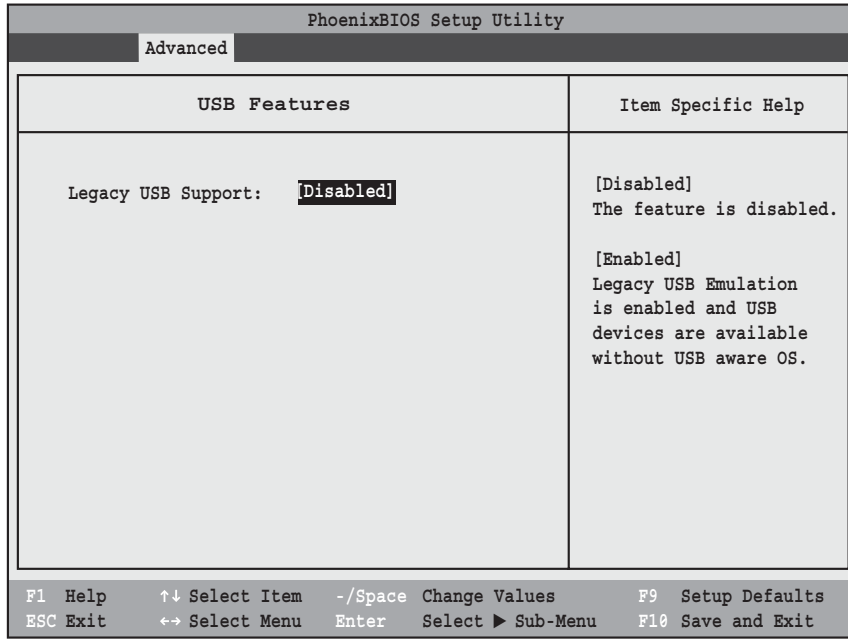
PhoenixBIOS Setup Utility
Advanced
USB Features
Item Specific Help
Legacy USB Support: [Disabled]
[Disabled]
The feature is disabled.
[Enabled]
Legacy USB Emulation is enabled and USB devices are available without USB aware OS.
F1 Help ↑↓ Select Item -/Space Change Values F9 Setup Defaults
ESC Exit ↔ Select Menu Enter Select ▶ Sub-Menu F10 Save and Exit

Figure 8. USB Features Submenu

Table 8: Fields, Options and Defaults for the USB Features Submenu of the Advanced Menu

Menu Field	Options	Default	Description
Legacy USB Support:	▪ Disabled ▪ Enabled	[Disabled]	When Enabled is selected, Legacy USB Emulation is enabled and the USB devices are available without a USB-aware OS. When Disabled is selected, Legacy USB support is disabled.

Miscellaneous Configurations Submenu of the Advanced Menu

The Miscellaneous Configurations Submenu provides options for enabling or disabling the power button and the Wake Up On LAN feature, and for enabling or disabling the system beep.

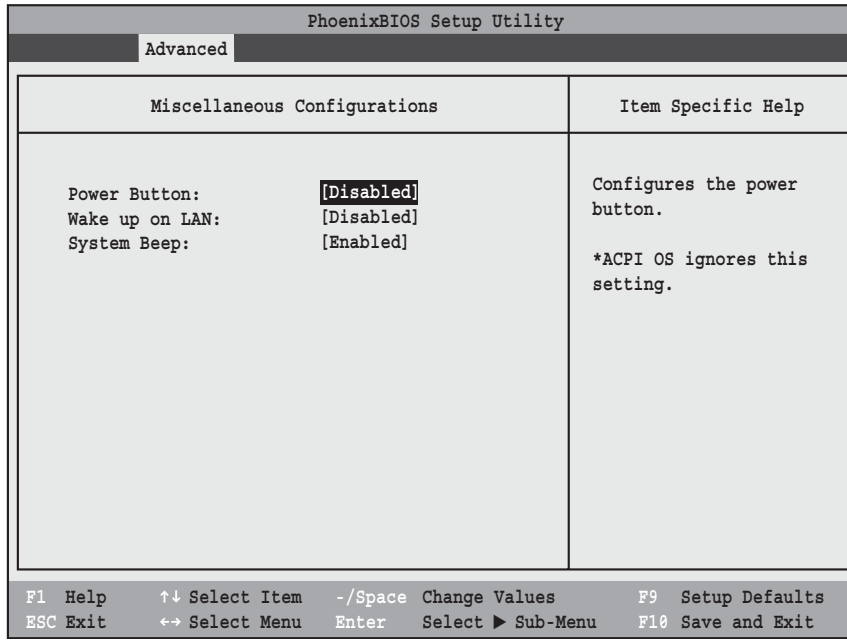
PhoenixBIOS Setup Utility
Advanced
Miscellaneous Configurations
Item Specific Help
Power Button: [Disabled]
Wake up on LAN: [Disabled]
System Beep: [Enabled]
Configures the power button.
*ACPI OS ignores this setting.
F1 Help ↑↓ Select Item -/Space Change Values F9 Setup Defaults
ESC Exit ↔ Select Menu Enter Select ▶ Sub-Menu F10 Save and Exit

Figure 9. Miscellaneous Configurations Submenu

Table 9: Fields, Options and Defaults for the Miscellaneous Configurations Submenu of the Advanced Menu

Menu Field	Options	Default	Description
Power Button:	▪ Disabled ▪ Power Off	[Disabled]	Selecting Disabled disables the power button. Selecting Power Off allows you to turn off system power with the power button.
Wake up on LAN:	▪ Disabled ▪ Enabled	[Disabled]	Selecting Enabled allows the system to wake up when the internal LAN device receives a specific signal while in power-off state. Selecting Disabled disables this feature.
System Beep:	▪ Disabled ▪ Enabled	[Enabled]	Allows you to enable and disable the system beep.

Event Logging Submenu of the Advanced Menu

The Event Logging Submenu configures event logging features for DMI events.

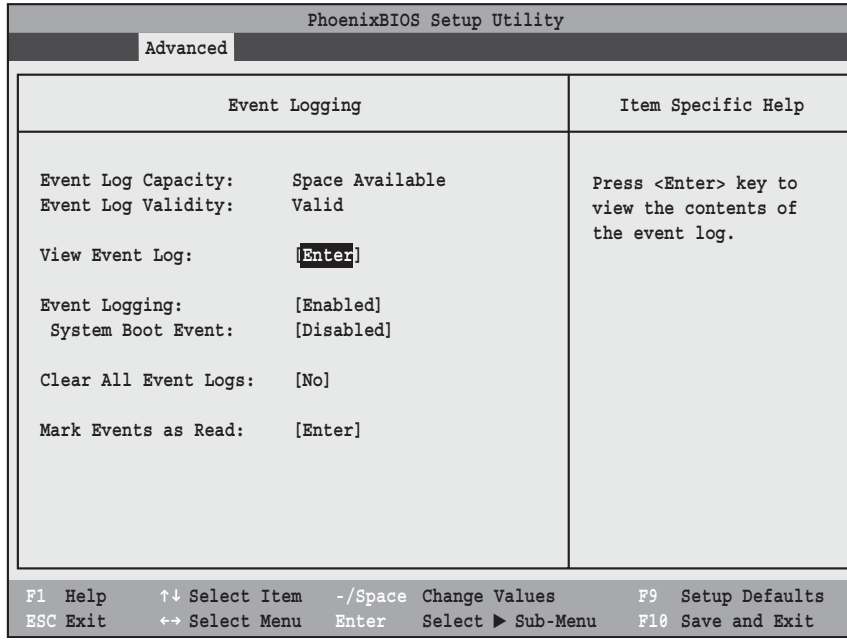
PhoenixBIOS Setup Utility
Advanced
Event Logging
Item Specific Help
Event Log Capacity: Space Available
Event Log Validity: Valid
View Event Log: [Enter]
Event Logging: [Enabled]
System Boot Event: [Disabled]
Clear All Event Logs: [No]
Mark Events as Read: [Enter]
Press <Enter> key to view the contents of the event log.
F1 Help ↑↓ Select Item -/Space Change Values F9 Setup Defaults
ESC Exit ↔ Select Menu Enter Select ▶ Sub-Menu F10 Save and Exit

Figure 10. Event Logging Submenu

Table 10: Fields, Options and Defaults for the Event Logging Submenu of the Advanced Menu

Menu Field	Options	Default	Description
Event Log Capacity:		Space Available	Display only
Event Log Validity:		Valid	Display only
View Event Log:	▪ Enter	[Enter]	Allows you to view content of event log
Event Logging:	▪ Disabled ▪ Enabled	[Enabled]	Turns event logging on and off for all DMI events.
System Boot Event:	▪ Disabled ▪ Enabled	[Disabled]	Turns event logging on and off for DMI system boot events.
Clear All Event Logs:	▪ No ▪ Yes	[No]	When set to [Yes] all event logs will be cleared at next boot.
Mark Events as Read:	▪ Enter	[Enter]	Allows you to mark all events currently in the event log as having been read.

SECURITY MENU – SETTING THE SECURITY FEATURES

The Security menu allows you to set up the data security features of your notebook to fit your operating needs and to view the current data security configuration. Follow the instructions for Navigating Through the Setup Utility to make any changes.
(See Navigating Through The Setup Utility on page 2 for more information.)

The following tables show the names of the menu fields for the Security menu and its submenus, all of the options for each field, the default settings and a description of the field's function and any special information needed to help understand the field's use. The default condition is no passwords required and no write protection.

POINT

If you set a password, write it down and keep it in a safe place. If you forget the password you will have to contact your support representative to regain access to your secured functions and data.

POINTS

- Entering a password incorrectly 3 times in a row will cause the keyboard and mouse to be locked out and the warning `[System Disabled]` to be displayed. If this happens restart the computer by turning off and on the power with the power switch and use the correct password on reboot.
- If you make an error when re-entering the password a `[Warning]` will be displayed on the screen. To try again press the Enter key and then retype the password. Press the Esc key to abort the password setting process.
- If the Power Management Security is Enabled and the Password on Boot is Disabled you will not have to type your password upon resuming the system from the Suspend or Save-to-Disk modes. Power Management Security will work only if Password boot is enabled.

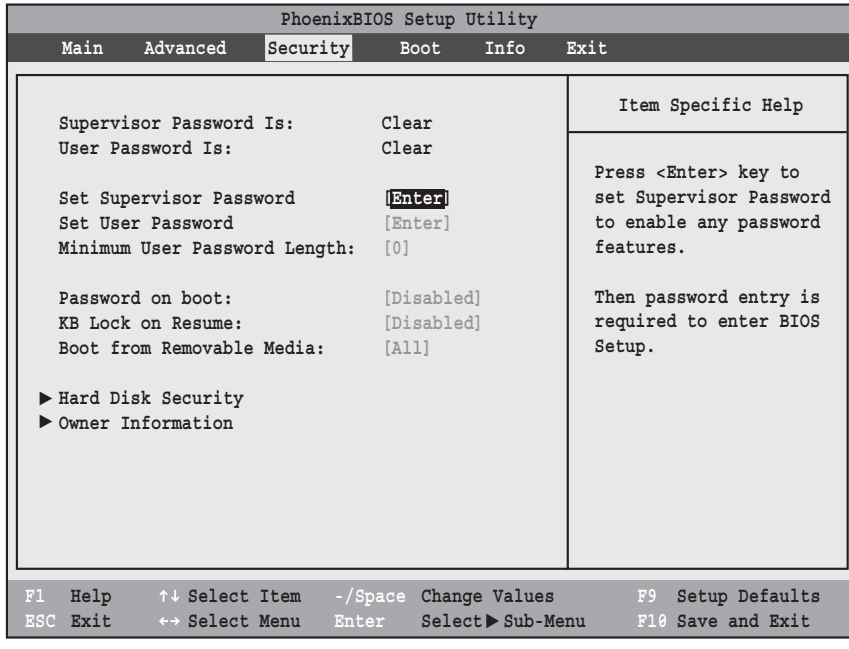
PhoenixBIOS Setup Utility
Main Advanced Security Boot Info Exit
Supervisor Password Is: Clear
User Password Is: Clear
Set Supervisor Password [Enter]
Set User Password [Enter]
Minimum User Password Length: [0]
Password on boot: [Disabled]
KB Lock on Resume: [Disabled]
Boot from Removable Media: [All]
▶ Hard Disk Security
▶ Owner Information
Item Specific Help
Press <Enter> key to set Supervisor Password to enable any password features.
Then password entry is required to enter BIOS Setup.
F1 Help ↑↓ Select Item -/Space Change Values F9 Setup Defaults
ESC Exit ↔ Select Menu Enter Select ▶ Sub-Menu F10 Save and Exit

Figure 11. Security Menu

Table 11: Fields, Options and Defaults for the Security Menu

Menu Field	Options	Default	Description
Supervisor Password is:	—	Clear	A display-only field. Set is displayed when the system supervisor password is set and Clear when it is not.
User Password is:	—	Clear	A display-only field. Set is displayed when the general user password is set, and Clear when it is not.
Set Supervisor Password	—	[Enter]	Sets, changes or cancels the Supervisor Password. Supervisor's Password may be up to seven characters long and must include only letters or numbers (no symbols). Passwords are NOT case- sensitive. To cancel a password press the Enter key instead of entering characters in the Enter New Password field and in the Re-enter New Password field. When a Supervisor Password is set it must be used to access the BIOS setup utility.
Set User Password	—	[Enter]	This field can only be accessed if the Supervisor Password is set. Sets, changes or cancels the User Password. The User Password may be up to seven characters long and must include only letters or numbers (no symbols). Passwords are NOT case-sensitive. To cancel a password press the Enter key instead of entering characters in the Enter New Password field and in the Re-enter New Password field. When a User Password is set it must be used to access the BIOS setup utility.
Minimum User Password Length:	—	[0]	Supervisor can set password length (0 to 8) for user password. User cannot set a password shorter than the minimum length.
Password on Boot:	▪ Disabled ▪ First Boot ▪ Every Boot	[Disabled]	When set to First Boot, a password (User or Supervisor) is required just once after the Power On Self Test (POST) before the operating system will be read from a disk. When set to Every Boot, a password (User or Supervisor) is required every time after the Power On Self Test (POST) before the operating system will be read from a disk. When set to Disabled no password is required.
KB Lock on Resume:	▪ Disabled ▪ Enabled	[Disabled]	When set to Enabled, the PS/2 mouse and keyboard inputs are locked out upon Resume from Suspend or Save to Disk mode until you enter the password. When set to Disabled no password is required. If no Supervisor Password is set, this feature is not available and no password is required.
Boot from Removable Media:	▪ All ▪ Supervisor only	[All]	When All is selected, booting from removable media is not restricted. When Supervisor Only is selected, only the Supervisor (i.e., the user who enters Supervisor password), can boot from removable media.
Hard Disk Security:	—	—	Configures hard disk security features
Owner Information:	—	—	Sets Owner information.

Exiting from the Security Menu

When you have finished setting the parameters on the Security Menu, you can either exit from setup utility or move to another menu. If you wish to exit from setup utility, press the Esc key to go to the Exit Menu. If you wish to move to another menu, use the cursor keys.

Hard Disk Security Submenu of the Security Menu

The Hard Disk Security Submenu is for configuring hard disk security features.

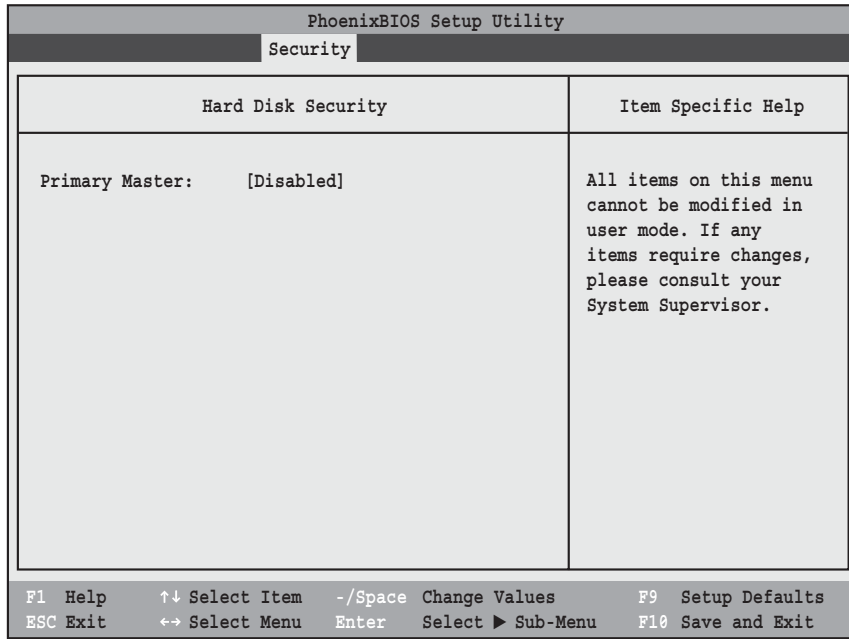
PhoenixBIOS Setup Utility
Security
Hard Disk Security
Item Specific Help
Primary Master: [Disabled]
All items on this menu cannot be modified in user mode. If any items require changes, please consult your System Supervisor.
F1 Help ↑↓ Select Item -/Space Change Values F9 Setup Defaults
ESC Exit ↔ Select Menu Enter Select ▶ Sub-Menu F10 Save and Exit

Figure 12. Hard Disk Security Submenu

Table 12: Fields, Options and Defaults for the Hard Disk Security Submenu of the Security Menu

Menu Field	Options	Default	Description
Primary Master:	▪ Disabled ▪ Enabled	[Disabled]	Default is Disabled. When the Supervisor Password has been set, the field can be changed. When enabled, the hard disk is locked with the password. Data in the locked disk cannot be read on any systems other than the original system on which it is locked or systems that have the identical password setting.

Owner Information Submenu of the Security Menu

The Owner Information Submenu is for setting owner information. Note that the owner information cannot be set without having entered a Supervisor password.

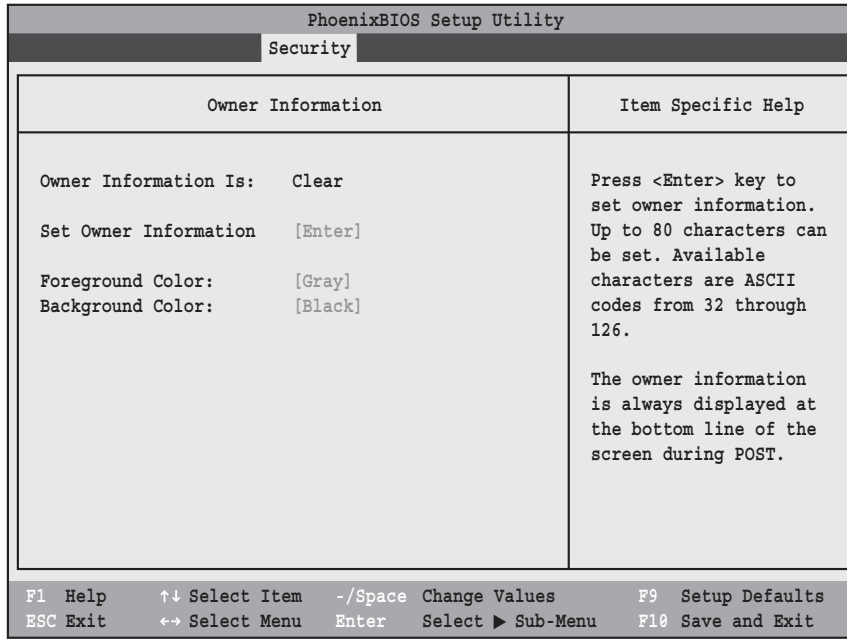
PhoenixBIOS Setup Utility
Security
Owner Information
Item Specific Help
Owner Information Is: Clear
Set Owner Information [Enter]
Foreground Color: [Gray]
Background Color: [Black]
Press <Enter> key to set owner information. Up to 80 characters can be set. Available characters are ASCII codes from 32 through 126.
The owner information is always displayed at the bottom line of the screen during POST.
F1 Help ↑↓ Select Item -/Space Change Values F9 Setup Defaults
ESC Exit ↔ Select Menu Enter Select ▶ Sub-Menu F10 Save and Exit

Figure 13. Owner Information Submenu

Table 13: Fields, Options and Defaults for the Owner Information Submenu of the Security Menu

Menu Field	Options	Default	Description
Owner Information Is:	—	Clear	Display only.
Set Owner Information:	—	[Enter]	Field to write owner information, (i.e., name).
Foreground Color:	▪ Black ▪ Blue ▪ Green ▪ Cyan ▪ Red ▪ Magenta ▪ Brown ▪ White ▪ Gray ▪ Light Blue ▪ Light Green ▪ Light Cyan ▪ Light Red ▪ Light Magenta ▪ Yellow ▪ Bright White	[Gray]	Set foreground color.
Background Color:	▪ Black ▪ Blue ▪ Green ▪ Cyan ▪ Red ▪ Magenta ▪ Brown ▪ White ▪ Gray ▪ Light Blue ▪ Light Green ▪ Light Cyan ▪ Light Red ▪ Light Magenta ▪ Yellow ▪ Bright White	[Black]	Set background color.

BOOT MENU – SELECTING THE OPERATING SYSTEM SOURCE

The Boot Menu is used to select the order in which the BIOS searches sources for the operating system. Follow the instructions for Navigating Through the Setup Utility to make any changes. *(See Navigating Through The Setup Utility on page 2 for more information.)*

The following tables show the names of the menu fields for the Boot menu and its submenu, all of the options for each field, the default settings and a description of the field's function and any special information needed to help understand the field's use.

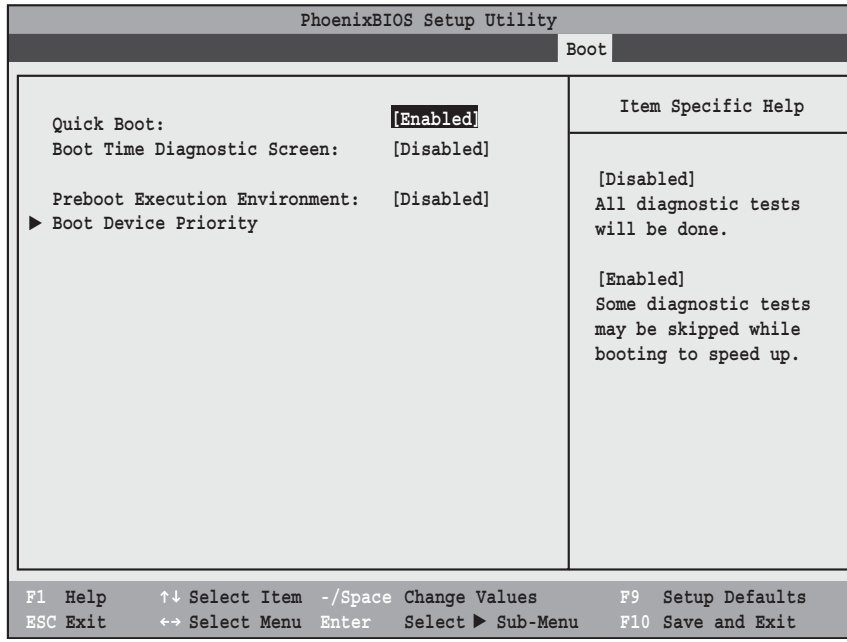
PhoenixBIOS Setup Utility
Boot
Quick Boot: [Enabled]
Boot Time Diagnostic Screen: [Disabled]
Preboot Execution Environment: [Disabled]
▶ Boot Device Priority
Item Specific Help
[Disabled]
All diagnostic tests will be done.
[Enabled]
Some diagnostic tests may be skipped while booting to speed up.
F1 Help ↑↓ Select Item -/Space Change Values F9 Setup Defaults
ESC Exit ↔ Select Menu Enter Select ▶ Sub-Menu F10 Save and Exit

Figure 14. Boot Menu

Table 14: Fields, Options and Defaults for the Boot Menu

Menu Field	Options	Default	Description
QuickBoot:	▪ Disabled ▪ Enabled	[Enabled]	Turns on and off booting with a truncated set of Power On Self Test. (Fewer tests mean faster turn on.)
Boot-time Diagnostic Screen:	▪ Disabled ▪ Enabled	[Disabled]	Turns on and off display of test results instead of Fujitsu logo screen during Power On Self Test.
Preboot Execution Environment:	▪ Disabled ▪ Enabled	[Disabled]	Turns on and off the preboot execution environment feature.
Boot Device Priority	—	—	This menu allows setting up the source for the operating system. See "The Boot Device Priority Submenu" in the following section.

Boot Device Priority Submenu of the Boot Menu

The Boot Device Priority Submenu is for setting the order of checking of sources for the operating system.

CAUTIONS

- Be aware of the operating environment when booting from a CD-ROM or you may overwrite files by mistake.
- A bootable CD-ROM has either a floppy disk format or a hard drive format. When the bootable CD-ROM is used, the drive allocations change automatically without changing the BIOS setup. If a floppy disk format is used, the CD-ROM becomes Drive A. The CD-ROM will only take drive C: (hard drive format) if the internal hard drive is not present or is disabled. The bootable CD-ROM can never use a C: designation if a formatted internal hard drive is present since the C: designator is always reserved for the internal hard drive.The boot sequence ignores the new drive designations, however, your application software will use the new designations.

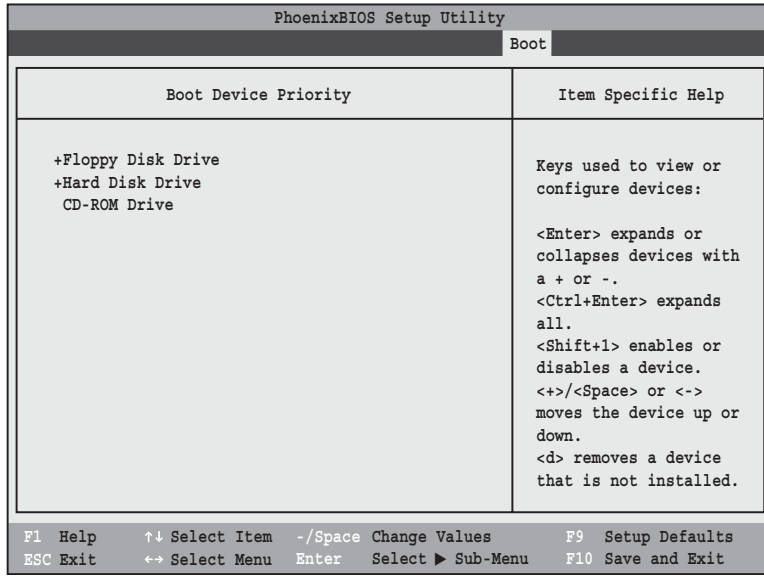
PhoenixBIOS Setup Utility
Boot
Boot Device Priority
Item Specific Help
+Floppy Disk Drive
+Hard Disk Drive
CD-ROM Drive
Keys used to view or configure devices:
<Enter> expands or collapses devices with a + or -.
<Ctrl+Enter> expands all.
<Shift+1> enables or disables a device.
<+>/<Space> or <-> moves the device up or down.
<d> removes a device that is not installed.
F1 Help ↑↓ Select Item -/Space Change Values F9 Setup Defaults
ESC Exit ↔ Select Menu Enter Select ▶ Sub-Menu F10 Save and Exit

Figure 15. Boot Device Priority Submenu

Table 15: Fields, Options and Defaults for the Boot Device Priority Submenu of the Boot Menu

Menu Field	Description
+Floppy Disk Drive +Hard Disk Drive CD-ROM Drive	The boot selections determine the order in which the BIOS searches for the operating system during a startup sequence. To view all devices related to a source, press [Enter]; to view all devices related to all sources, press [Ctrl] + [Enter]. To change the order, highlight one source by using the [up] or [down] cursor keys and then press the [+] or [-] key to change the order number. [Shift] + [1] enables or disables a device.Tapping [d] removes from the list a device that is not installed.Be sure to save your changed order when you exit the BIOS setup utility. NOTE: Be aware that if you use the CD-ROM drive as the first boot device, certain files may be overwritten, depending upon your operating environment.

Exiting from Boot Menu

When you have finished setting the boot parameters with the Boot menu, you can either exit from the setup utility or move to another menu. If you wish to exit from the setup utility press the Esc key to go to the Exit menu. If you wish to move to another menu, use the cursor keys.

INFO MENU - DISPLAYS BASIC SYSTEM INFORMATION

The Info menu is a display only screens that provides the configuration information for your notebook.

The following table shows the names of the menu fields for the Info menu and the information displayed in those fields. These fields are for information purposes only, and cannot be modified by the user.

POINTS

The information, including CPU type and speed, and total memory, displayed on this screen varies according to the unit you purchased.

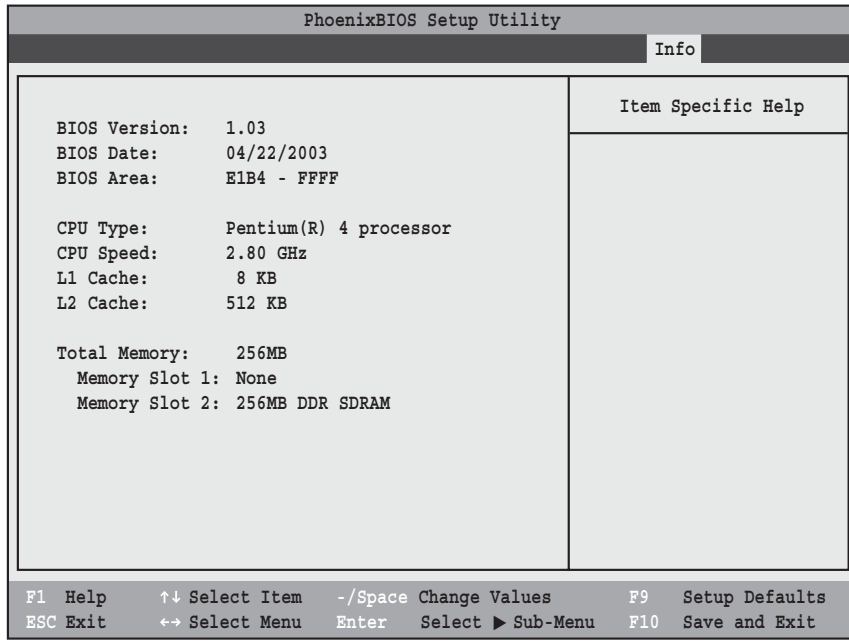
PhoenixBIOS Setup Utility
Info
Item Specific Help
BIOS Version: 1.03
BIOS Date: 04/22/2003
BIOS Area: E1B4 - FFFF
CPU Type: Pentium(R) 4 processor
CPU Speed: 2.80 GHz
L1 Cache: 8 KB
L2 Cache: 512 KB
Total Memory: 256MB
Memory Slot 1: None
Memory Slot 2: 256MB DDR SDRAM
F1 Help ↑↓ Select Item -/Space Change Values F9 Setup Defaults
ESC Exit ↔ Select Menu Enter Select ▶ Sub-Menu F10 Save and Exit

Figure 16. Info Menu

Table 16: Fields, Options and Defaults for the Info Menu

Note that the parameters listed in the following table may be different, depending upon the system configuration.

Menu Field	Default	Menu Field	Default
BIOS Version:	1.03	L1 Cache:	8 KB
BIOS Date:	04/22/2003	L2 Cache:	512 KB
BIOS Area:	E1B4 – FFFF	Total Memory:	256 MB
CPU Type:	Pentium(R) 4 processor	Memory Slot 1:	None
CPU Speed:	2.80 GHz	Memory Slot 2:	256 MB DDR SDRAM

EXIT MENU – LEAVING THE SETUP UTILITY

The Exit Menu is used to leave the setup utility. Follow the instructions for Navigating Through the Setup Utility to make any changes. *(See Navigating Through The Setup Utility on page 2 for more information.)*

The following table shows the names of the menu fields for the Exit menu, the default settings and a description of the field's function and any special information needed to help understand the field's use.

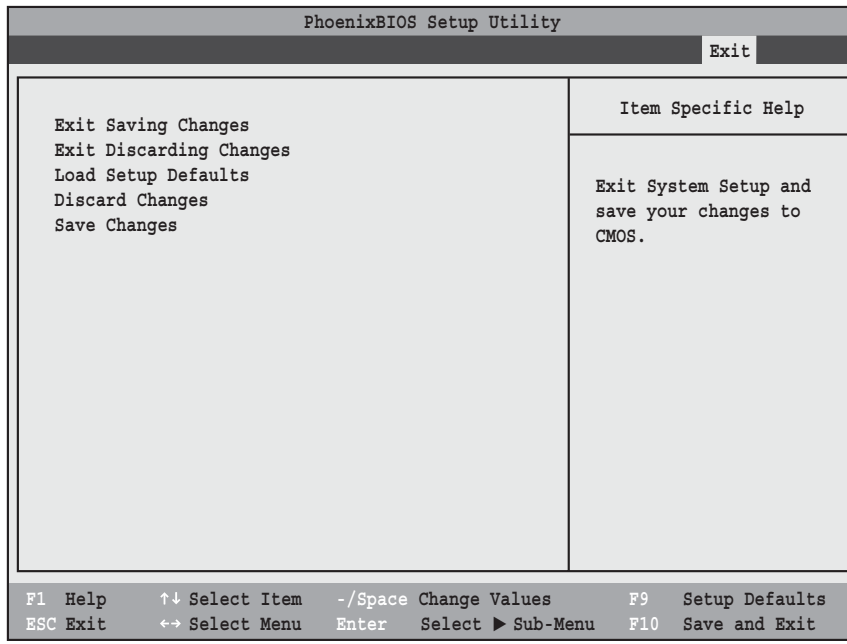
PhoenixBIOS Setup Utility
Exit
Exit Saving Changes
Exit Discarding Changes
Load Setup Defaults
Discard Changes
Save Changes
Item Specific Help
Exit System Setup and save your changes to CMOS.
F1 Help ↑↓ Select Item -/Space Change Values F9 Setup Defaults
ESC Exit ↔ Select Menu Enter Select ▶ Sub-Menu F10 Save and Exit

Figure 17. Exit Menu

Table 17: Fields, Options and Defaults for the Exit Menu

Menu Field	Description
Exit Saving Changes	Exit Saving Changes and Exit will store all the entries on every menu of the setup utility to the BIOS memory and then exit the setup utility. A confirmation message `Save Configuration changes and exit now? [Yes] [No]` will be displayed.
Exit Discarding Changes	Selecting Exit Discarding Changes and Exit will exit the setup utility with out writing to the BIOS memory. When the BIOS recognizes this selection it will load the operating system and begin operation.
Load Setup Defaults	Selecting Load Setup Defaults will load the factory preset default values for all menu fields, then display the message `Load default configuration now? [Yes] [No].` When confirmed the setup utility will return to the Exit Menu. To return to another menu follow the directions in the Navigating Through the Setup Utility Section.
Discard Changes	Selecting Discard Changes will load the previous values in BIOS memory for all menu fields. The message `Load previous now? [Yes] [No]` will be displayed. When confirmed the setup utility will return to the Exit menu. To return to another menu, follow the directions in the Navigating Through the Setup Utility Section.
Save Changes	Selecting Save Changes will cause the new settings in all menus to be written to the BIOS memory. The message `Save configuration changes now? [Yes] [No]` will be displayed. When confirmed, the setup utility will return to the Exit menu. To return to another menu, follow the directions in the Navigating Through the Setup Utility section.